REMARKS

Reconsideration of this application is respectfully requested. Petition is hereby made for a three-month extension of time to respond to the outstanding Office Action of January 11, 2007.

Claims 1 – 21 are pending in the application. Upon entry of this Response, claims 1 – 21 will be amended to remove the reference numerals recited in such claims and thereby conform such claims to typical U.S. patent practice.

In the outstanding Office Action of January 11, 2007, the Examiner rejected claims 1 – 4, 6, 8, 10, 12 – 14, 16, 18, 20 and 21 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,741,315 to Lee *et al.* In the outstanding Office Action, the Examiner also rejected as being unpatentable under 35 U.S.C. §103(a) claims 5, 7, 11, 15 and 17 over Lee *et al.* alone, and claims 9 and 19 over Lee *et al.* in view of U.S. Patent No. 5,527,348 to Winkler. The Examiner's rejections are respectfully traversed.

For a claim to be anticipated by a reference, every element in the claim must be disclosed in the reference. Here, Lee *et al.* do not anticipate claims 1 – 4, 6, 8, 10, 12 – 14, 16, 18, 20 and 21 because they do not disclose a transmission device for transmitting an alternating magnetic field to a receiver implanted in a human's or animal's body to supply energy drawn from the alternating magnetic field to an energy consuming implant in the human's or animal's body, a coil that generates the alternating magnetic field towards the implanted receiver, and that has a front end directed towards the receiver and a rear end directed away from the receiver, and a shield that shields the environment from

the alternating magnetic field generated by the coil, except at the front end of the coil, and that includes a magnetizable core extending in the coil and a magnetizable casing that is integrated with the core and that surrounds the rear end of the coil and the circumference of the coil along at least a portion of a longitudinal extension of the coil, as recited in independent claims 1, 10, 20 and 21 of the present application.

Lee *et al.* disclose a device for receiving signals emitted by an active implanted medical device. The device has a signal collector coil for the reception of a magnetic induction which receives a useful signal component (B_s) emitted by the implanted device 26 and a parasitic signal component (B_p) of external origin. There is at least one collecting coil 12 wound on the central core 14 of a half-pot (or open pot) 16 of ferrite. The central cylindrical core 14 is surrounded by an annular space 18 and a peripheral ring 20. There is also a compensation coil 22 that is wound on the peripheral ring 20 of pot 16. The ferrite pot 16 also carries an emission coil 24 serving for the transmission of signals from a programmer to the implanted device 26. Lee *et al.* note that, "by convenience" the coil 24 is also disposed on the pot 16, since coil 24 does not participate in the reception of signals from the implanted device 26. Because collecting coil 12 is wound on central cylindrical core 14, which is a first portion of a magnetic circuit, and compensation coil 22 is wound on peripheral ring 20, which is a second portion of the magnetic circuit, when the device 10 is positioned in face of the implanted device 26, the collecting coil 12 is essentially crossed one time by the magnetic induction field lines of the useful signal component (B_s) and the compensation coil 22 is crossed essentially

twice, in opposite direction, by the same magnetic induction field lines, thereby allowing the discrimination of the useful signal component for improved signal to noise ratios and high speed data transmission.

Thus, Lee *et al.* focus on improving the signal received by their signal collector system. And although Lee *et al.* teach the use of an emission coil 24, this coil is used to transmit communication signals from a programmer to the implanted device 26. In Lee *et al.* there is no discussion about shielding, especially not about shielding the environment from an alternating magnetic field. This is logical, since the programmer is used for low intensity communication signals. Moreover, the emission coil 24 is located in such a way that the magnetic field generated by the emission coil 24 is not shielded or confined by the ferrite pot 16. Specifically, the emission coil 24 is placed on the outside of the ferrite pot 16. Ferrite pot 16 has the shown shape shown in Figures 1 and 2 of Lee *et al.* to cause the collecting coil 12 to be crossed only once by the magnetic induction field lines B_s and to cause the compensation coil 22 to be crossed twice in opposite directions by the same magnetic induction field lines B_s. As noted above, this is done to improve the collected signal, since the influence of the parasitic induction B_p can be compensated for (*see, e.g.,* Lee *et al.*, col. 4, line 49 – col. 5, line 9).

In contrast, the present application discloses a transmission device for transmitting energy to an energy consuming implant, such that the strength of the magnetic field is much higher than in the case of a magnetic field used for communication purposes.

Thus, the present application also relates to reducing the influence of an alternating magnetic field, generated by the transmission device, on the environment.

Consequently, the claimed transmission device of the present application and apparatus for receiving telemetry signals disclosed in Lee *et al.* relate to different applications, *i.e.,* the claimed transmission device transmits signals to transfer energy/power to an implanted device, while Lee *et al.'s* receiving apparatus receives communication signals from an implanted device. As such, the construction of the two devices is different. For example, in Lee *et al.* the transmitting coil 24 is located outside of the pot 16, while the transmitting coil of the claimed transmission device is located within the shield. Thus, in the claimed transmission device the shield shields the environment from the alternating magnetic field generated by the coil, while in Lee *et al.* there is no structure that shields or confines the alternating magnetic field generated by the emission coil 24.

Thus, independent claims 1, 10, 20 and 21 of the present application are not anticipated by Lee *et al.* And because independent claims 1, 10, 20 and 21 are not anticipated by Lee *et al.*, dependent claims 2 – 4, 6, 8, 12 – 14, 16 and 18, which depend from such claims, are also not anticipated by Lee *et al.*

With regard to the Examiner's rejection of claims 5, 7, 11, 15 and 17 under §103(a) over Lee *et al.* alone, given the deficiencies in Lee *et al.* noted above, such claims are also not unpatentable over such reference.

With regard to the Examiner's rejection of claims 9 and 19 under §103(a) over Lee *et al.* in view of Winkler, Winkler discloses an apparatus for providing electrical field (E-field) shielding for electro-magnetic devices. The embodiment of the device shown in Figure 2 of Winkler is a programming head 100 from an implantable medical device programming system housed within a nonconductive exoskeleton. This exoskeleton is comprised of top and bottom portions 102 and 104, respectively, and an internal retainer element 106, each of which are preferably made of molded plastic, ABS, or the like. Within the exoskeleton 102/104 of programming head 100 is a wire coil antenna assembly 108 comprising one or more wires 110 coiled multiple times around a rigid spool 112. The wire coil antenna assembly 108 is preferably shielded from E-fields, but not from magnetic fields (H-fields). A pattern of electrically conductive material, such as a nickel-acrylic paint or the like, is applied to interior surfaces of the exoskeleton to define multiple distinct and discontinuous areas of conductive material on the exoskeleton. In other embodiments, both E-shielding and H-shielding may be similarly accomplished by coating the entire inner surface of the exoskeleton.

Hence, Winkler discloses a plastic exoskeleton containing a wire coil antenna assembly 108, but there is no coil and shield arrangement that is "located at a distance, in the order of centimetres, from an operator's hand, when the operator holds the transmission device during operation," as recited in claims 9 and 19. There is no discussion in Winkler about the distance between the coil and/or shield and the hand of an operator because the programming head 100 is part of an <u>implantable</u> medical device

that is not normally held during operation. Moreover, even if programming head 100 were held, the electrically conductive material, such as a nickel-acrylic paint or the like, is applied to interior surfaces of the exoskeleton, and thus, would not be "centimeters" from a holder's hand. And because there is no discussion in Winkler about the distance between the coil antenna and the plastic exoskeleton, there is no teaching of the coil being "located at a distance, in the order of centimetres, from an operator's hand."

Finally, since claim 9 is dependent on claim 1 and claim 19 is dependent on claim 10, given the deficiencies in the teachings of Lee *et al.* noted above, the subject-matter of claims 9 and 19 is neither anticipated by, nor obvious over, a combination of Winkler and Lee *et al.*

In view of the foregoing, it is believed that all of the claims pending in the application, *i.e.*, claims 1 – 21, are now in condition for allowance, which action is earnestly solicited. If any issues remain in this application, the Examiner is urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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